cavities. Thus, it may be fairly supposed, they are by nature and *experience* fitted to arrange *themselves* in orderly fashion, side by side, to form a living membrane ; and the behaviour just now described seems to be an adaptation of such behaviour to the entirely novel circumstances imposed upon them by the human experimenter.

In any case we have here, as in the foregoing case also, the whole constituted by the coining together of many minor wholes.

(6) The many and varied experiments on transplanting and grafting of parts of animals give in many cases results difficult to reconcile with the doctrine that the whole controls and directs the parts. For example: *(a)* in the developing newt the tail-bud may be transplanted to the site of a leg ; and there may become a leg: but, if the tail organization has proceeded some little way before the operation, the bud may continue in its new site to grow as a tail—the whole does not dominate the part, *(b)* A developing optic vesicle, or part of it, placed under the skin of the back, may there induce lens formation: clearly a local influence not contributing to the welfare of the whole or, so far as can be seen, in any manner governed by the whole, *(c)* A limb-bud may be amputated when partially differentiated and, if replanted after rotation on its long axis through 180°, may undergo reorganization so as to produce a normal limb. This looks like the influence of the whole determining the fate of the part according to its position in the whole. But if the bud be amputated together with a disc of the

surrounding tissue, and the piece rotated through 180° and, subsequently after healing, the bud alone is rotated again and replanted, it may undergo a reorganization in conformity, not with the whole, but with the rotated disc. In this case the